#### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

99.28 File #:

## WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-013387 Address: 333 Burma Road **Date Inspected:** 18-Mar-2010

City: Oakland, CA 94607

**OSM Arrival Time:** 700 **Project Name:** SAS Superstructure **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC) Chanxing Island **Location:** Shanghai, China

**CWI Name:** Mr. Liu Hua Jie **CWI Present:** Yes No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A Yes No N/A **Approved Drawings:** Yes No **Approved WPS:** Yes No N/A **Delayed / Cancelled:** 

34-0006 **Bridge No: Component: OBG Segment** 

### **Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance Inspector (QA), Vibin Kumar Selvanayaham, was present during the times noted above for observations relative to the work being performed.

Bay 14

This QA inspector observed ZPMC qualified welding personnel identified as 201215 perform Shielded Metal Arc Weld (SMAW) Welding on OBG Segment 9BW, weld joint identified as OBW9E-021. ZPMC QC is identified as Mr. Li Ping. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-B-P-2214-Tc-U4b-FCM-1.

This QA inspector observed ZPMC qualified welding personnel identified as 201215 perform Flux Cored Arc Welding (FCAW) Welding on OBG Segment 12BW, weld joint identified as . ZPMC QC is identified as Mr. Zhong Guo Hui. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-B-T-4133.

This QA inspector observed ZPMC qualified welding personnel identified as 050242 perform FCAW Welding on Corner Assembly, weld joint identified as CA3001J-001~006. ZPMC QC is identified as Mr. Zhong Guo Hui. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-B-T-2132.

This QA inspector observed ZPMC qualified welding personnel identified as 201215 perform FCAW Welding on

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Corner Assembly, weld joint identified as CA3001F-001~012. ZPMC QC is identified as Mr. Zhong Guo Hui. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-B-T-4133.

This QA inspector observed ZPMC qualified welding personnel identified as 201215 perform FCAW Welding on Corner Assembly, weld joint identified as CA3001J-013~022. ZPMC QC is identified as Mr. Zhong Guo Hui. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-B-T-2132.

This QA inspector observed ZPMC qualified welding personnel identified as 045265 perform Submerged Arc Welding (SAW) Welding on OBG Segment 12CW, weld joint identified as SEG3006\*-003. ZPMC QC is identified as Mr. Liu Hua Jie. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-B-T-2221-B-L2-C-S-2.

This QA inspector observed ZPMC qualified welding personnel identified as 201215 perform FCAW Welding on OBG Segment 12BW, weld joint identified as SEG3005K-018, 031, 046. ZPMC QC is identified as Mr. Liu Hua Jie. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-B-T-2232-Tc-U4b-F.

This QA inspector observed ZPMC qualified welding personnel identified as 045227 perform FCAW Welding on OBG Segment 12BW, weld joint identified as SEG072\*-047. ZPMC QC is identified as Mr. Liu Hua Jie. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-B-T-2233-B-U2-F.

#### Outside Yard 9BW

This QA inspector observed ZPMC qualified welding personnel identified as 067942 perform Shielded Metal Arc Weld (SMAW) Welding on OBG Segment 9BW, weld joint identified as OBW9E-019, 020. ZPMC QC is identified as Mr. Li Ping. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-B-P-2214-Tc-U4b-FCM-1.

This QA inspector observed ZPMC qualified welding personnel identified as 067752 perform Shielded Metal Arc Weld (SMAW) Welding on OBG Segment 9BW, weld joint identified as OBW9E-021. ZPMC QC is identified as Mr. Li Ping. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-B-P-2214-Tc-U4b-FCM-1.

Description of Incident: During random Quality Assurance visual review of the Suspender Bracket (SB) components, this Quality Assurance Inspector (QA) observed ZPMC personal completed weld repairs by SMAW welding without prior Engineer approval or utilizing an approved critical weld repair procedure (CWR). Total Sixteen (16) Transverse Cracks measuring approximately 15mm to 10mm in length, found by CT QA –B238. The weld is identified as: SB010-042-026. This weld is a fillet weld (Seal Weld) type, joining SB42E-C to X60L Anchor Plate Stiffener. This weld is designated as Non Seismic Performance Critical Member (Non SPCM) on the approved drawing (SB10). This component is located in OBG fabrication shop Bay #19. For further information, please see the attached pictures below.

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Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.





## **Summary of Conversations:**

Only general conversation was held between QA and QC concerning this project.

## **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact, who represents the Office of Structural Materials for your project.

Inspected By:	Kumar, Vibin	Quality Assurance Inspector
Reviewed By:	McClendon,Timothy	QA Reviewer